

AD-A275 878



DTIC
ELECTE
FEB 15 1994
S C D

③

**COST IMPACTS of MAJOR SYSTEM CANCELLATION on
ACQUISITION CONTRACTING and the INDUSTRIAL BASE**

*for presentation at the
27th Annual DoD Cost Analysis Symposium*

JULY 1993

Prepared by:

Randy Jordan

**U.S. Army Cost and Economic Analysis Center
5611 Columbia Pike, Falls Church VA, 22041**

DISTRIBUTION STATEMENT A
Approved for public release
Distribution Unlimited

22pg 94-04955



94 2 14 018

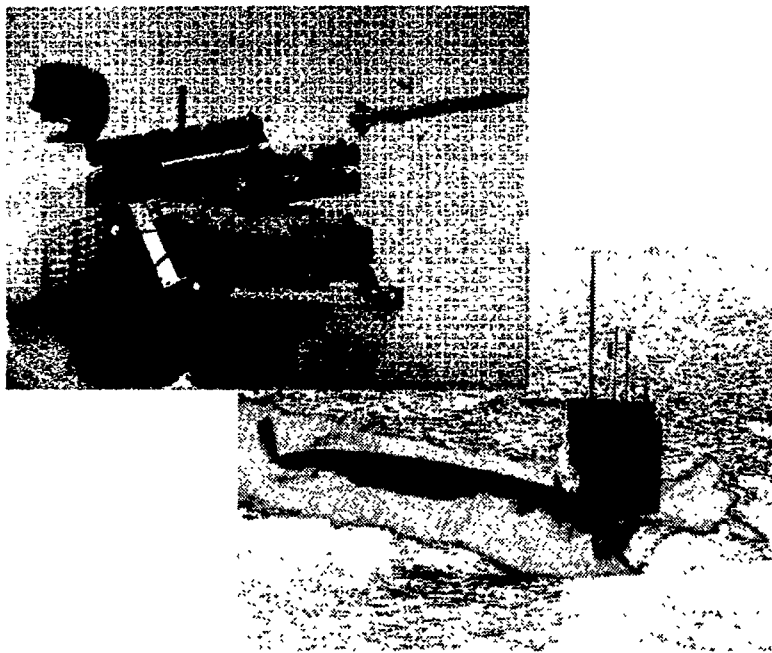
THE COST IMPACTS OF MAJOR SYSTEM CANCELLATION ON ACQUISITION CONTRACTS

Drastic cutbacks in defense spending, mainly as a part of domestic economic problems and reduced threat, have manifested into the reduction and redeployment of the Armed Forces of the United States and attempts at diversification on the part of the industrial base. Currently, programs are being stretched out into future years in order to reduce the impact of budget reductions. Eventually, selected programs will be eliminated entirely based on zeroed out budgets, thus the contracting activities will be forced to realize the cost and economic impact associated with the cancellation of major systems.

The purpose of this paper is to focus on the processes involved with contract termination and its effects on DOD and the industrial base.

Mr. Randall Jordan
Operations Research Analyst
U.S. Army Cost and Economic Analysis Center
SFFM-CA-PI
5611 Columbia Pike
Falls Church VA 22041
Comm (703) 756-0326/7
DSN 289-0326/7

**COST IMPACTS of MAJOR SYSTEM
CANCELLATION on ACQUISITION
CONTRACTING and the INDUSTRIAL BASE**



*Terminating Major Weapon System Contracts for the Government's
Convenience*

by Randy Jordan

Accession For	
NTIS	CRA&I
DTIC	TAB
Unannounced Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
P-1	

a detailed notice to effect a termination for the convenience of the Government. Under the FAR, the prescribed notice should include the following:

1. A statement that the contract is being terminated for the convenience of the Government.
2. The effective date of the termination.
3. The extent of the termination, whether whole or partial.
4. Recommended actions to minimize the impact of the termination, especially on personnel.
5. Any special instructions regarding work in process or other matters.

TCO Duties. The TCO directs the action required of the prime contract, examines the settlement proposal of the prime and subcontractors, promptly negotiates a settlement, and resolves all other remaining issues. The TCO is required to request specially qualified personnel to:

1. Assist in dealings with the contractor.
2. Advise on legal contractual matters.
3. Conduct accounting reviews and advise and assist on accounting matters.
4. Perform functions regarding termination inventory such as:
 - a. Verify its existence.
 - b. Determine qualitative and quantitative allocations.
 - c. Make recommendations concerning serviceability.
 - d. Undertake necessary screening redistribution.
 - e. Assist the contractor in accomplishing other disposition.

Contractor Responsibilities. The contractor is responsible for subcontractor claims which are considered allowable to system termination and reasonable termination costs. The FAR, Parts 31, 45.6, and 49, describes contractor and government responsibilities and procedures to follow in settling a claim arising from a contract termination. The FAR, Part 49.107, requires the TCO to submit prime contractor proposals and certain subcontract proposals to the Defense Contract Audit Agency (DCAA)

for review and recommendations. This audit is extremely important since it controls the pricing mechanisms used by the contractor.

Recovery Under T4C. When a contract is T4C, the contractor may: (1) recover his cost of performance incurred up to the time of termination, (2) recover certain continuing costs, (3) recover settlement expenses, (4) for fixed price contracts, recover an allowance for profit, or, for cost reimbursement contracts, a portion of the fee. Allowance for profit or fee would be negated if it is determined that the contract would have been performed at a loss.

Cost Accounting Standards. The Cost Accounting Standards (CAS) issued by the Cost Accounting Standards Board (CASB) are aimed primarily at assuring more uniform treatment of costs incurred by Government contractors. By law, the CASB's cost accounting standards apply only to negotiated prime and subcontract national defense procurements. The FAR exempts sealed bid contracts and negotiated subcontracts below \$100,000. CAS collectively represent the Government's view of acceptable cost accounting techniques. The CAS standards are applicable to negotiated contracts and subcontracts exceeding certain limits.

CAS 401. CAS 401 requires the contractor to accumulate costs in the same way as estimated. Cost estimates used in a prospective contract normally anticipate the contract going to completion. Cost arrangement in a termination claim may differ significantly from the cost presentation contained in the original estimate. A contract termination in essence creates a situation that is totally unlike a contract completion. Therefore, it is not reasonable to extend the consistency requirement to an event not anticipated in the original estimate.

CAS 402. CAS 402 requires a contractor to classify consistently costs in like circumstances as either direct or indirect. Termination claims often include as direct charges costs or functions which would have been charged indirect if the contract had been completed. Examples are settlement expenses and unexpired lease costs. If the contract is terminated, these costs become directly related to the cancellation of the system.

CAS 406. CAS 406 requires the contractor to use the full fiscal year for its cost accounting period in computing of costs. However, the FAR recognizes that some indirect costs may represent a minor part of the year and, therefore, a full fiscal year for computational use may not be necessary.

Quantifying Termination Variables

Assessment. If anything is "easy" about evaluating or determining termination costs, it would involve the assessment of where the system falls in terms of complexity, contract type, and milestone phase. These are probably the first variables to consider. Other variables which must be considered are: (a) precontract costs, (b) initial costs, (c) modification or disposal costs of special tooling, (d) cost of completed supplies, (e) termination inventory costs, (f) government or contractor facilities employed, (g) unexpired leases and alterations of leased property, (h) administrative costs for prime and sub-contractors, (i) sub-contractor claims, and (j) post-termination costs.

Contractor Accounting System. The contractor is required to maintain an accounting system capable of quantifying these variables after termination. The TCO has the authority to assemble a group of technical specialists to evaluate the variables which drive the termination costs within the settlement proposal. Such an estimate would reflect a specialized form of cost analysis employing an integrated team of government contracting, contract administration, cost/pricing, and engineering representatives. This process differs from a regular cost analysis because of the number of diverse team members and the benefit derived by being conducted in the contractors plant. The objective of this type of cost analysis should be to identify any deficiencies in the accounting system of the contractor which may interfere with achieving allowable and reasonable termination costs.

Contract Termination Examples

Sergeant York

The Sergeant York Gun (called DIVAD for Division Air Defense), was T4C on 27 August 1985 by the Secretary of Defense based on system performance in the Initial Production Test and Follow-On-Evaluation. No consideration was given to the originally planned buy of 614 systems down to 64 units as the reason for termination.

Reasons for Sergeant York T4C. Unanticipated difficulties in transition from prototype to full scale production consisting of test failures, design changes, rework, final assembly interface problems, and overtime expended to make up schedule.

Costs for Sergeant York T4C

1. The major cost for the Sergeant York system termination was due to administrative cost of the prime contractor and a number of subcontractor settlement claims. While the subcontractor claims were significantly larger than other costs attributed to termination. This was attributed to each subcontractor maintaining a team of individuals per subcontract to peruse settlement costs.

2. Other variables attributed to the termination costs of Sergeant York included: quantity reduction, deletion of previous schedule changes, disposal of ammunition requirements, disposal of support equipment, and spares requirements.

Replacement for DIVAD. The Army, having an urgent need for an adequate air defense in the forward area to replace Sergeant York, acquired the Line of Sight Forward Heavy (LOS-F-H).

Line of Sight Forward-Heavy (LOS-F-H)

Contractor Selection. Following a seven month candidate evaluation phase, Martin Marietta Missile Systems (MMMS) was chosen as the LOS-F-H prime contractor on November 30, 1987. A firm fixed price contract was awarded which covered the RDT&E-funded Operational Assessment.

Contract Termination

LOS-F-H T4C. LOS-F-H contract was terminated for the convenience of the Government on 13 June 1992. All unliquidated activity in the contract except support test which extended through 29 February 1992 was suspended.

Reason. The contract was terminated partially due to political conflict, but also due to reliability problems which caused a \$16.5 million cost increase in the program.

Termination Elements

1. Based on the sensitivity of the settlement negotiations, MMMS was reluctant in dispersing information concerning the estimated cost data within their settlement proposal. During the earlier phase of the contract, a clause for recognition of the contractor's non-recurring investment was included by the Government in consideration of MMMS's investment in the Option IV contract. This clause made the termination of the LOS-F-H contract somewhat unique in that a proposal for these

costs as well as "normal" termination costs were submitted to the TCO as a part of the termination process.

2. The contractor, with the Government's approval, choose to separate the termination proposal into six distinctive parts which allowed for the timely submittal and audit/review of each element comprising the total termination process. The six elements of costs included in these proposals were:

- a. Supplemental Funding Proposal
- b. Indemnified Prime PST/PSTE
- c. Labor costs for prime contractor for the unliquidated portion of the contract through termination
- d. Non-labor for the Prime contractor for the unliquidated portion of the contract through termination
- e. Termination from 13 February 1992 through settlement
- f. Indemnified Subcontractor PST/PSTE

Ongoing Negotiations. The negotiations are ongoing for the determination of what elements are allowable and reasonable in terms of costs.

1. Based on general limitations set forth by the FAR, in a fixed type contract, the sum of the contractor's recovery in the termination settlement, exclusive of settlement expenses and the payments made under the contract, may not exceed the contract price. However, based on a special clause in the original contract, the contractor is allowed to recover all non-recurring costs attributed to development.

2. The Government recognizes that the contractor has taken a significant financial investment in the LOS-F-H program. The clause states that in the event the Government terminates this contract for convenience, the contractor may include in its termination claim reasonable, allocable, and allowable unrecovered investment costs to the extent such costs do not cause the termination settlement to exceed the funding obligated in the contract.

3. The TCO has made the determination that the contractor should receive the balance remaining on the firm fixed price contract. MMMS is requesting a settlement amount of \$80 million which includes non-recurring investment and indemnification costs.

T4C Impact on the Industrial Base

Industrial Base Adjustments. As DoD has changed the way it procures, the industrial base has adjusted the way it invests. DoD's efforts to concentrate in the area of research and development has directly influenced the way contractors generate new business. Since 1991, General Dynamics has been selling off defense and non-defense parts of the business, whittling down to a few core operations in which it is dominant. Based on the decline in production contracts, the Hughes Corporation has adjusted to the changing industrial base by instituting a production base big enough to support its scientists and engineers. As DoD attempts to funnel more dollars into researching a wide array of advanced technologies while building relatively few of the actual weapons, those companies remaining a part of the industrial base will reorganize their internal functions in support of change.

Funding Research and Development. The problem will come at the prime contractor level where enormous research and technical sophistication will be required to develop major systems through the engineering and development stage. Contractors can no longer wait 10 or 15 years for a return on their investment. Since the return on investment will no longer come from the production lines. Contractors are now forced to intelligently target potential projects that DoD might want to buy. Decisions to invest in new technologies will be difficult, since these investments are longer term, inherently expensive and frequently involve significant risk and uncertainty. For these efforts to be profitable, DoD will have to allow for profit to be built into research and development (R&D) contracts based on industry trends. The new administration proposes that the government supply funding for development to companies in an attempt to keep private companies alive. This is not necessarily a philosophy geared towards the defense industry, but it may become one.

Crucial Industries. The program reductions will lessen the number of companies having the ability to fulfill the requirement for developing major systems. Few companies have been awarded contracts to keep production line running that may be crucial in war time. However, DoD is now keeping a handful of small companies ready for war. For example, Survival Technology is the only U.S. manufacturer of nerve gas antidote for injection kits. In a crash program, Survival Technology produced more than two million units for military personnel in the Gulf War. Fearing the company might stop making the antidotes in peacetime, DoD is paying Survival Technology \$16 million over three years to keep its St. Louis production line running at a reduced level. This is one of the first contracts awarded by DoD for sole suppliers of items that maybe crucial in war time.

Less Competition, Higher Costs. With fewer companies, there is bound to be an increased number of sole sources which could mean higher prices. Thus, companies awarded development contracts will automatically inherit production contracts and, with fewer companies dual sourcing in development, production dollars become more difficult to obtain.

SEAWOLF Termination

SSN-21. The SSN-21 contract was terminated in January 1992. The main issue was termination costs versus completion costs for these submarines and the effect on the nuclear shipbuilding industrial base. Once slated to consume \$44 billion for 29 boats, the Seawolf program has become a topic of fierce contention in Congress because its cancellation means the end of thousands of jobs in Virginia and New England. Currently, two class SSN-21 ships will be constructed. Two ship builders, Electric Boat and Newport News Shipbuilding, are competing for this work. However, with a decreasing work load neither can sustain its current nuclear-powered submarine construction capacity and/or capability. As a result, costs for the two class SSN-21 submarines and other ships currently under construction will more than likely rise in costs because overhead costs are allocated over a smaller production base, a smaller more senior, higher paid work force, and higher vendor costs.

Maintaining Industrial Base. Currently, DoD is reviewing alternatives to ensure maintenance of yards, subcontractors, and skilled work force needed to build nuclear submarines which may be crucial in war time. Congress made \$540.2 million available to help preserve the industrial base for submarine construction. The Navy plans to split these funds between the SSN-21 and SSN-22 cost growth and to purchase spare parts.

Work Force Losses. The economic impact of program reductions means a massive loss of highly skilled, high paying jobs and a serious national adjustment to an economy not supplemented by large defense spending. Many high technology jobs have been eliminated which could result in an estimated two million defense production workers added to the current number of defense workers unemployed. The problem is the abundance of highly skilled people such as engineers and scientists who have been trained in one skill area and must now be retrained. In order to be employable, the responsibility for retraining will rely on the worker, business, or the Government.

Sanity Check of Contractor Settlement Proposals

Settlement Proposal. The contractor is responsible for submitting the termination settlement proposal no later than one year from the effective date of termination, unless extended by the TCO through written notification. To insure the reasonableness and allocability of costs, it is pertinent that DoD has an accurate system for evaluating the validity of settlement proposals. Usually large contractors maintain accounting systems which generally meet the criteria set by CAS in determining termination costs. Small contractors have a greater possibility of having inadequate accounting systems because of the cost associated with acquiring such a system to meet the CAS requirements.

Audit. One of the primary tools for determining whether contractors are submitting reasonable and allowable settlement proposals is an audit follow-up system conducted by the Defense Contract Audit Agency (DCAA). The audit follow-up system becomes more significant in controlling costs as the financial conditions of the industrial base deteriorates. In the past, there have been inadequate cost estimating tools and methodologies used by contractors when charging the government for new major systems or modifications to existing systems. In the future, a strong contractor system of determining termination costs will be a major control for ensuring reasonable settlement costs.

Correlation Between Estimates and Proposals. Concern should involve the direct correlation between inadequate cost estimates and unreasonable termination settlement proposals. If cost elements such as labor, materials, and the unit cost (inventory related costs) are overstated in the original acquisition estimate the elements are carried over to the settlement proposal. Submitting quality cost estimates on the acquisition of new systems will eliminate the possibility of estimating errors influencing termination claims.

Basis for Evaluating Settlement Proposals

FAR. The FAR provides general guidance for T4C settlements. Also, it provides special principles for settlements involving fixed price contracts and cost reimbursement contracts with the principles for fixed price contracts are considerably more complex. Two major methods for the submission of settlement proposals by the contractor--an Inventory Basis Method which the FAR states as the preferred method and a Total Cost Basis Method. Under both methods for submission of settlement proposals, the contractor is paid the price for items completed and accepted.

according to the FAR, but the accounting treatment of the work is different.

Inventory Basis Method. Under the Inventory Basis Method, the contractor's costs are allocated to inventory items such as raw materials, purchased parts, work-in-process, and tooling. Other appropriate charges, such as initial and administrative costs, costs of settling with subcontractor's and other settlement expenses are added. The aggregate costs are then augmented by profit (or adjusted for loss) and any credits owing to the Government. An example of this would be the unliquidated progress payments deducted to arrive at a net settlement amount. The Inventory Basis Method limits items which are residual due to the termination action. Use of this method requires the contractor to have an accounting system which is capable of accurately segregating costs terminated and undetermined portions of work.

Total Cost Basis Method

Definition. The Total Cost Basis Method measures total costs incurred without allocation to particular items in inventory. It is appropriate for use only when the inventory method is not practical or will unduly delay settlement. If the contractor's accounting system is not developed sufficient enough to capture costs such as the unit costs or work in process and finished products, the Total Cost Basis Method will generally be approved for use.

Methodology. The method is determined by the TCO with assistance from the FAR which provides other circumstances for usage of the Total Cost Basis Method:

1. If production has not started and the accumulated costs represent planning and preproduction or start-up expenses.
2. If the contract does not specify unit prices.
3. If the contract termination is complete and involves a letter contract.

FAR Guidance. The FAR gives guidance concerning the use of the Total Cost Basis Method in both complete and partial termination situations. Under a complete termination, the contractor must itemize costs incurred under the contract up to the effective date of termination. The expenses must be added. Allowance for profit or adjustment for loss must be made. The contract price for all end-items delivered or to be delivered and accepted must be deducted. Under the Total Cost Basis Method for

partial termination, the settlement proposal is not be submitted until completion of the continued portion of the contract. All costs incurred to the date of completion of the continued portion of the contract must be included.

Barriers in Determining Liabilities and Proposals

Following are some barriers encountered in determining termination liabilities and settlement proposals:

Lack of Knowledge and Training. There is a lack of knowledge and training in the area of predicting termination costs within the cost community.

Data Are Not Available. Access to contractor data may not be convenient and variables such as administrative costs, subcontractor claims, post termination costs, and unexpired leases are generated through contractor accounting systems.

Faulty Coordination. Coordination and communication between organizational elements to assist in the study may be difficult.

Methodologies Available for Cost-To-Complete Estimate

Affordability Analyses. System affordability has given a rise to studies developed such as the Bottom-up Review which evaluated alternative system mixes and associated costs in the areas of development, production, sustainment, and military personnel. Once definite decisions are made about certain mixes of systems, the liabilities of those systems cancelled must be addressed. Demonstrating the liabilities associated with T4C may become a possibility if leadership requests the development of a study to display termination costs.

Cost/Schedule Control Systems Criteria. The Cost/Schedule Control Systems Criteria (C/SCSC) is intended to serve as standards for measuring the adequacy of management control systems. The requirements of the C/SCSC are primarily oriented to obtaining accurate reports of program progress. There is also required to periodically make estimates of cost at contract completion. The contractor is required to utilize a system results in data and capabilities specified in a format acceptable to DoD. The contractor's internal systems must be able to provide the following:

1. Budgeted Cost for Work Schedule (BCWS)
2. Budgeted Cost for Work Performed (BCWP)
3. Actual Cost of Work Performed (ACWP)
4. Estimated Cost at Completion (EAC)
5. Budgeted Cost at Completion (BAC)
6. Cost and Schedule Variances - Explanations
7. Traceability

CFSR, CPR, and CCDR. Contract funding requirements reported on the CFSR can be reconciled with the estimated costs at completion reported on the CPR and Contract Cost Data Reports (CCDR). The diagram below (Figure 1) displays reports which contain the necessary information in order to develop an EAC.

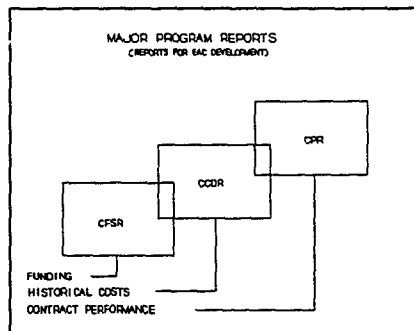


Figure 1. Major Program Reports

Contract Funds Status Report. The CFSR is used to obtain funding on contracts over six months in duration and provides information used to assist in updating and forecasting contract fund requirements, planning and decision making of funding changes, developing fund requirements and budget estimates in support of approved programs, determining funds in excess of contract needs and available obligations.

Contract Performance Report. The CPR is used to obtain contact cost and schedule performance information. This report is designed to show early indicators of contract cost and schedule problems and the effects of management actions taken to resolve these problems. The CPR is a direct output of the contractor's internal data reporting mechanism in a format useful to DoD managers and contractors. The data elements of BCWS, BCWP, and ACWP reported on a cumulative basis are obtained in the CPR as of the reporting cut-off date.

Contract Cost Data Report. Projected and actual costs and related data are reported on selected contracts within acquisition programs through the contractor cost data reporting system. CCDR reporting covers production commitment. CCDR are required for large advanced prototype programs.

Methodology for Range Estimates At Completion (EAC)

EAC Basis. EAC estimates are based on performance to date and consider other factors which affect future performance. The exact methodology for computing the EAC is up to the cost analyst, but should be rational and reflect the current and future trends of the contract. The cost analyst must be able to start from a known position in order to develop a reasonable estimate. The analysis of prior performance is an intricate part of the estimating process.

EAC Timeline. The diagram on the following page (Figure 2) points out where the ACWP, BCWS, BCWP, and EAC are positioned in terms of time and dollars. In terms of time, the development of the EAC begins from the point where the calculation of the ACWP, BCWS, and BCWP are discontinued based on the date of termination.

EAC Calculation

First Step. To calculate an EAC, the initial step is to be able to choose a point in time to analyze trends and project future costs in order to estimate the EAC.

Second Step. Performance indices used in the EAC formula are:

1. CPI - Cost Performance Index = $BCWP / ACWP$
2. SPI - Schedule Performance Index = $BCWP / BCWS$
3. SCI - Schedule Cost Index = $CPI * SPI$

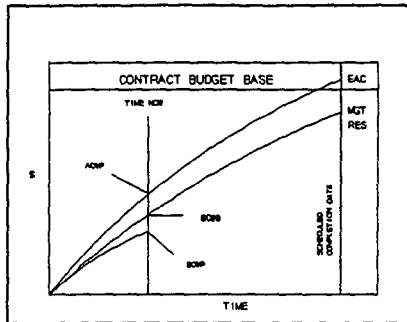


Figure 2. EAC Timeline

Third Step. Formulas used to calculate independent EACs are:

1. $EAC = BAC - BCWP + ACWP$
2. $EAC = BAC / \text{cumulative CPI}$
3. $EAC = [BAC / (CPI * SPI)] + ACWP$
4. $EAC = [(BAC - BCWP) / \text{cumulative CPI}] + ACWP$

Many Possible EACs. Cost analysis techniques yield a range of possible EACs, none of which are absolutes, all of which should be seen as possibilities.

Cost Analyst Involvement

Is the cost analyst capable of contributing towards developing termination liability studies and the process of evaluating settlement proposals?

To answer this question, first it is important that the current role of cost analysts in DoD be examined along with their requisite skills and abilities. Then, how these DoD cost analysts can make a significant contribution to the termination process will be discussed.

termination, unabsorbed overhead, and an equitable adjustment to the undetermined portion of the contract, if applicable.

Cost Analyst Tools. The process of estimating the cost of procuring, operating, and supporting a system will call for revised estimates beginning from the point in which the system has been terminated. This will insure that the cost of continuing the system is recognized in terms of dollars. In terms of estimating termination costs, the cost incurred up until the date of termination can be retrieved through contractor generated report such as the Contractor Performance Report (CPR) and the Contract Funds Status Report (CFSR). The bulk of the effort in determining the total cost of termination a program will involve the process of determining the estimate to complete (ETC) the contract.

Cost Analyst Settlement Proposals. When evaluating settlement proposals, reports such as the CPR and CFSR remain significant in validating the cost incurred up until the effective date of termination. The portion of the settlement proposal which will require the most attention in the evaluation process is the ETC submitted in the settlement proposal by the contractor. Factors considered when evaluating the cost ETC include: (a) experience data available before the government terminates the contract, (b) directly applicable experience for an entire product line previously produced, or (c) similar experience for other products or components.

ETC Tools. The methods to assist the cost analysts in evaluating the contractor's ETC involve the understanding of useful quantitative models and tools. For example, applying statistical sampling to inventory costing or to incurred costs can save considerable time. Also, an understanding of learning curve techniques is essential, particularly when evaluating contractor's and subcontractor's estimates to complete. The cost analyst can perform estimates of labor costs by calculating the hours expended on the work-in-process inventory by each labor category at each step in the production process. The estimated hours can then be derived at the hourly rates applicable during the performance period. The cost analyst may also use the learning curve method in evaluating the estimated prices of direct materials parts and components. The application of statistical techniques to methodologies as described enables the cost analyst to supply information that is logical, realistic, supported by valid data, common sense test, and is applicable to the system being terminated.

Conclusions

Diminished Threat. The government's right to exercise T4C on systems becomes more evident if the threat continues to diminish. In comparison with quantity reductions and system modifications, T4C has higher cost liabilities.

Future Trend. If requested to diagram the future trend of T4C on major systems, one could possibly view a gradual increase in terminations for three to five years culminating with a sharp decline thereafter. A decline will take place because fewer contracts will be awarded now which could be terminated later.

Assumption. An assumption of the future trend of T4C systems is diagramed below (Figure 3).

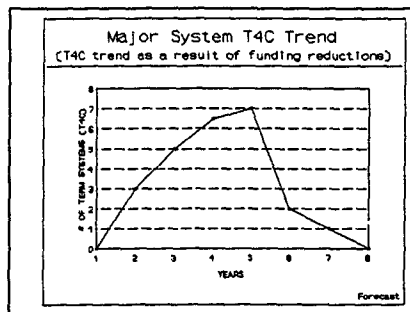


Figure 3. T4C Trends

Recovery of Contractor Costs. The determination of what termination costs are allowable and reasonable will become a major issue as more systems are T4C and contractors attempt to recover costs and profit. DoD must depend on the contractor's accounting system and the government's audit and evaluation process to insure the validity of the settlement proposal. The FAR and CAS contain procedures and regulations with guidelines for evaluating settlement proposals.

Termination Affordability. Studies such as the Bottom-Up Review, requested by OSD, and the upcoming Army Aviation Requirement and Affordability study, being conducted by the General Accounting Office (GAO), focus on efficient ways to manage and allocate diminished defense resources. Decisions made in these studies

could mean the cancellation of programs. Based on the costly impacts of cancellation, the risk of terminating a program should be measured against the risk of continuing a program. Such an analysis would reflect a termination liability assessment. DoD currently lacks a uniform procedures/criteria for this assessment. Program/buying offices normally rely on CFSR and progress payment information (for CR/Fixed Price Incentive and Fixed Price contracts, respectively) to estimate potential termination costs. In the absence of such data, procurement personnel must request contractors to provide estimates of their progress and expenditures to date to assist in developing those costs. In addition, termination decision models are often employed to determine the feasibility of terminating procurements involving spare/repair parts and other consumable items.

Cost Analyst Skills. Even though the cost analyst is not required to be involved in the termination process, the technical skills and policy insight in the acquisition process can be an asset. Thus, the ability of the cost analyst to adapt to the process of termination would be an asset and should not hinder this process.

Higher Costs. If full or partial terminations become common place, DoD can anticipate production costs to be higher than previously estimated for systems due to reallocating overhead over the reduced business base, increased labor rates for a smaller, more senior work force, and higher vendor costs, and anticipate that some contractors will file requests for equitable adjustments for delay and disruption due to stop work orders.

Can the Industrial Base Respond. The major concerns of the DoD focuses on whether or not the industrial base can respond if the threat escalates and will the current technology become outdated. Advocates of defense reductions contend that the U.S. will keep up with technology advances by placing emphasis on developing new technologies and placing them "on the shelf" rather than going into production. DoD is concerned that if these new technologies are kept on the shelf, the systems will fail to support the user when needed in the field.

Bibliography

- o Defense Contract Audit Agency Audit Manual, January 1993
- o GAO Navy Ships, Plans and Anticipated Liabilities to Terminate SAN-1 Programs Contracts, November 1992
- o GAO Contract Pricing, DoD's Audit Follow-up System Is Inaccurate and Incomplete
- o GAO Contract Pricing, Defense Contractor Cost Estimating Systems, January 1988
- o Termination Manual for Contract Administrative Services, Defense Logistics Agency, 1993
- o Termination Contract Values, Defense Logistics Agency, 1993
- o FAADS Termination Proposal, Elements of Cost, Kenneth O. Lam, Martin Marietta Missile Systems
- o Line of Sight-Forward-Heavy, A Historical Background, "The ADATS Story", By Jon J. Spano
- o Selected Acquisition Report, Program LOS-F-H, December 31, 1991
- o Selected Acquisition Report, Program SGT York Gun (DIVAD) September 30, 1985
- o Government Executive, The Facilitator, May 1993
- o Government Executive, Federal Contractors, August 1992
- o Administration of Government Contracts, John Cibinic Jr., Ralph C. Nash Jr., Government Contracts Program, George Washington University, 1986